

**REMARKS**

The present specification including the drawings has been amended for editorial purposes by correcting errors and adding reference numbers.

Claims 4-12 are pending in this application, with claim 4 being independent. Claims 8-12 have been newly added to recite additional features, support for which can be found, for example at page 10, line 11 to page 11, line 17, and throughout the specification and the drawings as filed.

Claims 4 and 5 have been amended and claims 8-11 have been added in order to recite the limitations similar to the claims of the European Patent Application (EP 04 775 193) corresponding to the present application. The claims of the European Application were allowed to be issued as a patent on March 16, 2009. (A communication from the European Patent Office allowing the claims is attached to this Amendment).

Claim 12 has been added to further define the slit regulating device, support for which can be found at page 10, line 12 to page 11, line 21 and throughout the specification and the drawings.

The drawings have been amended to provide proper reference numbers, support for which can be found at page 6, line 16 to page 9, line 8 of the specification. Accordingly, relevant parts of the specification have been amended to include corresponding reference numbers in accordance with the amended drawings.

Thus, by this Amendment, no new matter has been added and entry of these amendments is respectfully requested.

**Objection to the Drawings**

The Examiner objected to the drawings by stating that “it is not understood why Figures 2 and 3 are provided.” Figures 2 and 3 are provided because they are related to distinguishing features of the present disclosure as discussed below.

Figure 2 is provided to illustrate the slit regulating device 9 which is a distinguishing feature of the claimed invention as further discussed below. Figure 2 is necessary as it presents the regulating slits device (9) and its exact shape, namely the curves of its margins chosen in order to realize the modulation of the beam light. According to the present disclosure, the most important construction-related modification of the apparatus is the regulating slit device having reference number (9). The mounting of this device in the claimed apparatus makes an additional modulation in amplitude of the light emitted by the source, a modulation consisting in sectioning the beam light into light packages that succeed each other with a frequency inferior to that of the issued photons and at a longer wave length of the emitted photons. The phenomenon is known as “chopped light” (a light flux similar to its simplest application: the stroboscopic lamp used for its luminous effects).

Furthermore, the regulating slits device (9) is associated with the dimension of the shutter disc 8 and makes the two ellipses have different forms and dimensions, in contrast with WO 92/13597 (hereinafter as “Przybilla”). While, in Przybilla, the ratio of the ellipses’ axis of the orifices (c and d) is 066-095, in the present disclosure, the form and the dimension of c and d slits on the shutter disc 8 are variable, depending on the photons’ flux frequencies, which are imposed

by the sick people's diagnosis.

Due to the slit regulating device 9, the orifice of the slit c is designed to have a shape of a small ellipsis, and the orifice of the slit d is designed to have a shape of a small circle.

In Przybilla, the slits that are very big have the disadvantage of weaker control for obtaining the modulation frequencies.

Figure 3 is provided to illustrate the digital modulator of the light flux. Figure 3 presents the electronic scheme of the light flux digital modulator. This electronic scheme contains four operating blocks A, B, C and D and must be drawn in the figure in order for the person skilled in the art to understand the operation of the device with respect to the capability of modulating the beam light during the operation of the apparatus. The presentation of this electronic scheme makes the present invention different from the modulator described in US Patent No. 7,217,266 B2 to Anderson et al. (Publication No. US2003/0036751 A1, hereinafter as "Anderson").

Additionally, Applicant amended the drawings by adding reference numbers in Figures 2 and 3 such that the claimed invention can be easily understood.

Finally, Applicant has deleted the figures in sheets 4-6 which included the prior art tables which are not necessary for an understanding of the claimed invention as the Examiner suggested. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

**Objection to the Specification**

The specification was objected to because the specification provided descriptions about “Figure 4” which is not included in the disclosure. Applicant has deleted the descriptions relating to Figure 4 and the tables provided in the previous drawings as suggested by the Examiner. Accordingly, withdrawal of the objection to the specification is respectfully requested.

**Claim Rejections under 35 U.S.C. § 102**

The Examiner rejected claim 4 under 35 U.S.C. § 102 as being anticipated by Przybilla. Applicant respectfully traverses this rejection based on the amendments to the claims and the arguments below.

First, claim 4 requires that the medical apparatus be equipped with **a slit regulating device**. On page 3 of the Office Action, the Examiner asserted that reference number (15) of Przybilla is equivalent to the slit regulating device required by claim 4.

However, Applicant asserts that reference number (15) is equivalent to the engine (12) of the claimed apparatus such that it is not equivalent to the slit regulating device. Thus, Przybilla’s device is structurally different from the claimed apparatus.

As such, Applicant notes that this structural difference also makes the claimed apparatus distinct functionally from Przybilla’s device. In the present disclosure, the regulating slit device is configured to modulate the electromagnetic frequency of the photons emitted by the light source, which is impossible with Przybilla’s device. Particularly, the regulating slit device functions to

perform an additional modulation on the amplitude of the light emitted by the source so that the beam light is sectioned into light packages that succeed one another with a frequency lower than that of the issued photons. Through this technique, penetrating the human tissues becomes possible while Przybilla provides insufficient depth of penetrating light beam into the human tissues.

Second, claim 4 as amended requires that **the light source bulb be set in the focus of a mirror**, whereas, in Przybilla's device, the light source (6) is not within the mirror focus as seen in the figure of Przybilla.

As such, in the present disclosure, the processed light flux is made only of the rays directed from the light source, the incandescent bulb (4), and the rays reflected by the concave mirror (6), whereas, in Przybilla, the processed light flux is made of the rays directed from the light source (6) and two reflected rays: one by the concave mirror (7) and the other of rays reflected by the paletts of the fan (10).

Additionally, Applicant distinguished Przybilla from the claimed apparatus in the present specification, for example at page 10, line 6 to page 11, line 6. As discussed in these paragraphs, the issue of the insufficient depth of penetration of the light beams in the human tissues was the main problem with Przybilla's device. Due to its inability of penetrating the human tissues, the Przybilla apparatus may only be used to cure diseases on the surface of the epidermis. The cause of this insufficient penetration of the tissues by the light flux is that the phenomenon of penetration of the Przybilla apparatus is related only to the wavelength of the photons emitted by the light

source as discussed above.

For at least the reasons above, Applicant asserts that claim 4 is not anticipated by Przybilla because the claimed features are structurally and functionally distinguishable from Przybilla's device.

### **Claims Rejections under 35 U.S.C. § 103**

The Examiner rejected claims 5, 6 and 7 under 35 U.S.C. § 103 as being unpatentable over Przybilla, in view of Anderson.

Applicant asserts that claims 5, 6 and 7 are patentably distinguishable from the applied prior art because they depend from patentably distinguishable claim 1 as discussed above. Anderson does not cure the deficiencies of Przybilla. Thus, withdrawal of this rejection is respectfully requested.

### **New Claims**

Regarding newly added dependent claims 8-11, Applicant asserts that these claims should be allowable because independent claim 4 is allowable and because further distinguishing limitations are included.

Regarding claim 8, this claim requires "a fan located outside of the case." Przybilla only discloses a fan inside the case installed between the light source and the mirror, but it does not disclose a fan located outside the case.

Regarding claims 9 and 12, these claims further require the limitations such as: the size of the orifice of the rotating shutter disk being proportional to the intensity of the light flux and corresponding to rotational frequency of the rotating shutter disk; electromagnetic frequency band of the light source bulb between about 560 and about 3000 nm; the slit regulating device rendering the form and the dimension of the orifices of the shutter disc to be variable, depending on photons' flux frequencies; and the slit regulating device being configured to modulate the light flux to have a lower frequency, all of which are not disclosed in any applied prior art.

Additionally, claim 12 has been added to further define the feature with respect to the slit regulating device which is a distinct feature over the applied prior art as discussed above.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Should the Examiner have any questions or comments regarding this matter, the undersigned may be contacted at the below-listed telephone number.

Respectfully submitted,  
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P115276.A05 AH/DXN/SK